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GIFFORD PINCHOT, Forester.

WOOD USED FOR DISTILLATION IN 1905.

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The following statistics of the wood used for and the products of distillation in 1905 have been compiled from reports made by the operators of 82 distillation plants thruout the United States. The returns give the amounts of softwoods and hardwoods, but not the separate amounts of each kind in each class. Of the hardwoods, it is safe to say that beech, birch, and maple furnished over 80 per cent of the amount, while oak and other kinds of timber furnished the remainder. Of the softwoods, all of which are native to the South, longleaf pine probably furnished by far the greatest amount.

The tables show that the total consumption of the 82 plants was 676,739 cords, valued at $2,010,611; and that the products comprize 26,670,139 bushels of charcoal, 5,062,076 gallons of alcohol, 86,685,129 pounds of acetate of lime, 238,180 gallons of turpentine, and 1,039,980 gallons of tar and oil, besides 434,780 gallons of oil from pine distillation. The total for tar distillation from hardwoods is very small. As a matter of fact, the figures do not even approximate the actual amount, but, instead, represent only the amount saved and refined. Owing to certain characteristics of the tar obtained from hardwoods, which make it of low commercial value, most of it is used for fuel, either in carbonizing the wood or in refining the liquor, and when so used no record is kept of the quantity produced.

HARDWOOD DISTILLATION.

Tables 1 and 2 give the quantity of hardwood distilled and of the products. It will be seen that three States—Michigan, Pennsylvania, and New York—are in the lead. Of the States included under the heading "All others," Missouri ranks first. It may therefore be asserted that the hardwood-distillation industry is practically confined to these four States. The 67 plants reported from these States 659,770 cords of hardwood, with a total value of $1,967,806. The

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products were 26,370,033 bushels of charcoal, 5,062,076 gallons of alcohol, and 86,685,129 pounds of acetate. For the reason already given the amount of tar, oil, etc., is not correctly represented by the figures given.

TABLE 1.—*Hardwood distillation.*

State.	Number of establishments.	Wood used.		
		Cords.	Average value per cord.	Total value of raw material.
Michigan	6	239,992	$2.61	$627,521
New York	22	119,937	3.20	383,691
Pennsylvania	35	242,519	3.51	851,579
All others[a]	4	57,322	1.84	105,015
Total	67	659,770	.....	1,967,806

[a] Kentucky, Maine, and Minnesota.

TABLE 2.—*Hardwood distillation.*

State.	Products.			
	Charcoal.	Crude alcohol.	Acetate.	Tar and oil.
	Bushels.[a]	*Gallons.*	*Pounds.*	*Gallons.*
Michigan	8,143,387	1,246,121	14,778,695	549,730
New York	4,986,865	1,392,995	25,392,564	20,000
Pennsylvania	10,478,794	2,324,329	45,778,093	80,750
All others[b]	2,760,987	98,631	735,777	27,000
Total	26,370,033	5,062,076	86,685,129	677,480

[a] Bushel equivalent to 20 pounds.
[b] Kentucky, Maine, and Minnesota.

Pennsylvania leads in the amount of charcoal per cord, the results showing an average of 860 pounds, or 43 bushels. New York ranks second, with 840 pounds, or 42 bushels. Michigan, with but 680 pounds, or 34 bushels, is in striking contrast to the average production. In number of gallons of alcohol produced per cord, New York leads both Pennsylvania and Michigan, with an average of 11.6 gallons, followed closely by Pennsylvania, with an average of 9.6 gallons. The average for Michigan is but little more than half of either of these States, namely, 4.8 gallons. This may be due to the fact that in New York and Pennsylvania the wood is carbonized almost entirely in retorts, while in Michigan the brick kiln with direct fire is generally employed.

PINE DISTILLATION.

Tables 3 and 4 show the quantity of pine distilled and the products. Compared with the figures for hardwood, the quantity is insignificant; the total amount used by the 15 operators reporting was but 16,969 cords, with a value of $42,805. The products differed,

of course, from those of hardwood distillation, in containing a large amount of tar and turpentine, but no alcohol. Much less charcoal is obtained from pine than from hardwood, the average relative proportions being approximately 350 pounds per cord, as against approximately 700 pounds per cord. Tar, a by-product in hardwood distillation, is one of the major products of pine distillation. The average price of pine wood per cord also is lower.

TABLE 3.—*Pine distillation.*

State.	Number of establishments.	Wood used.		
		Cords.	Average value per cord.	Total value of raw material.
Georgia	4	8,925	$2.65	$23,643
North Carolina	5	4,624	2.46	11,387
South Carolina	4	1,970	1.74	3,425
All others	2	1,450	3.00	4,350
Total	15	16,969	.....	42,805

TABLE 4.—*Pine distillation.*

State.	Products.			
	Charcoal.	Tar.	Oil.	Turpentine.
	Bushels.[a]	*Gallons.*	*Gallons.*	*Gallons.*
Georgia	70,000	130,000	259,000	98,750
North Carolina	102,356	105,000	113,780	66,280
South Carolina	76,000	55,000	62,000	51,400
All others	51,750	72,500	.....	21,750
Total	300,106	362,500	434,780	238,180

[a] Bushel equivalent to 20 pounds.

GIFFORD PINCHOT,
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Approved:
JAMES WILSON,
Secretary.

WASHINGTON, D. C., *October 19, 1906.*

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